

WHAT IS CLAIMED IS:

1. A welding torch with a variable power trigger, which comprises:

a holdable torch gun having a first connection for hook up to a
5 gas or water supply, and a second connection for hook up to a power
supply, said gun having a discharge barrel with an outlet end, and a
handle extending downwardly from said discharge barrel, said discharge
barrel having a front facing in a same direction as said outlet end of said
discharge barrel, and said handle having a variable power trigger located
10 thereon such that said trigger is spring loaded away from said handle and
may be moved by pressure toward said handle, said trigger having an
unsqueezed position and a fully squeezed position and a range of motion
area between said unsqueezed position and said fully squeezed position,
and said handle having an amperage control mechanism located therein
15 and connected to said second connection;

wherein said trigger is moveably connected to said amperage
control mechanism such that said unsqueezed position prevents any
current to flow to said discharge barrel, said fully squeezed position
permits maximum current to flow to said discharge barrel and any
20 squeezed portion therebetween permits a proportionate amount of current
to flow to said discharge barrel in proportion to distance between said
unsqueezed position and said fully squeezed position.

2. The welding torch of claim 1 wherein said amperage control mechanism is a linear potentiometer.
3. The welding torch of claim 1 wherein said amperage control mechanism is a geared rotary potentiometer and said trigger includes a rack gear functionally connected to said geared rotary potentiometer.
4. The welding torch of claim 1 wherein said torch is a TIG torch.
5. The welding torch of claim 1 wherein said torch is a MIG torch.
6. The welding torch of claim 1 wherein said torch is water cooled.
7. The welding torch of claim 1 wherein said torch is gas cooled.
8. The welding torch of claim 1 wherein said handle extends downwardly from said discharge barrel at angle of about 60° to about 125° therefrom.
9. The welding torch of claim 1 wherein said trigger is located at said front of a said handle.
10. A welding torch system, including a torch with a variable power trigger, which comprises:

(a.) a welding power supply for receiving AC current and converting to DC current and providing DC current to a torch gun;

(b.) a holdable torch gun having a first connection for hook up to a gas or water supply, and a second connection for hook up to a power supply, said gun having a discharge barrel with an outlet end, and a handle extending downwardly from said discharge barrel, said discharge barrel having a front facing in a same direction as said outlet end of said discharge barrel, and said handle having a variable power trigger located thereon such that said trigger is spring loaded away from said handle and may be moved by pressure toward said handle, said trigger having an unsqueezed position and a fully squeezed position and a range of motion area between said unsqueezed position and said fully squeezed position, and said handle having an amperage control mechanism located therein and connected to said second connection;

wherein said trigger is moveably connected to said amperage control mechanism such that said unsqueezed position prevents any current to flow to said discharge barrel, said fully squeezed position permits maximum current to flow to said discharge barrel and any squeezed portion therebetween permits a proportionate amount of current to flow to said discharge barrel in proportion to distance between said unsqueezed position and said fully squeezed position.

11. The welding torch system of claim 10 wherein said welding power supply includes controls for setting a maximum current level selected from a plurality of maximum current levels for current provided to said torch gun.

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12. The welding torch system of claim 10 wherein said amperage control mechanism is a linear potentiometer.

10 13. The welding torch system of claim 10 wherein said amperage control mechanism is a geared rotary potentiometer and said trigger includes a rack gear functionally connected to said geared rotary potentiometer.

14. The welding torch system of claim 10 wherein said torch is a TIG torch.

15 15. The welding torch system of claim 10 wherein said torch is a MIG torch.

16. The welding torch system of claim 10 wherein said torch is water cooled.

17. The welding torch system of claim 10 wherein said torch is gas cooled.

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18. The welding torch system of claim 10 wherein said handle extends downwardly from said discharge barrel at angle of about 60° to about 125° therefrom.

19. The welding torch system of claim 10 wherein said trigger is located at
said front of a said handle.

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20. The welding torch system of claim 19 wherein said welding power
supply includes controls for setting a maximum current level selected
from a plurality of maximum current levels for current provided to said
torch gun.

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